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Measurements of CP violation at Belle

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We present some of the recent measurements of CP violation in B decays based on the full data sample containing 772 million B meson pairs collected at the $\Upsilon(4S)$ resonance using the Belle detector at the KEKB asymmetric-energy e^+e^- collider. In particular, we present measurements of time-dependent CP violation parameters in $B^0 \rightarrow \eta' K^0$, $B^0 \rightarrow \omega K_S^0$ and $B^0 \rightarrow K_S^0 \eta \gamma$ decays. In the Standard Model these decays only proceed through the $b \rightarrow s$ quark transition penguin diagrams and are as such very sensitive to new CP violating phases carried by potential new heavy particles in the loops. In addition we also present measurement of direct CP violation in $B^0 \rightarrow \eta' K^{*0}$, and measurement of branching fraction of $B^0 \rightarrow \pi^0 \pi^0$ decay. The latter result plays an important role in determinations of ϕ_2 angle of the unitarity triangle.

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